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IN THE CLAIMS:

Please cancel claims 4, and 28-32.

Please amend claims 1, 9, 23, 26, 27, and 33-35 as follows.

1. (once amended) An isolated nucleic acid that encodes a fusion polypeptide, wherein the fusion polypeptide comprises:

- a) a catalytic domain of a glycosyltransferase that catalyzes the transfer of a saccharide, from a saccharide donor comprising a nucleotide sugar, to an acceptor molecule; and
- b) a catalytic domain of an accessory enzyme that catalyzes the formation of the nucleotide sugar.

9. (once amended) The nucleic acid of claim 1, wherein the accessory enzyme is selected from the group consisting of:

- a GDP-mannose dehydratase;
a GDP-mannose 3,5-epimerase;
a GDP-mannose 4-reductase;
a UDP-glucose 4' epimerase;
a UDP-GalNAc 4' epimerase;
a CMP-sialic acid synthetase;
a neuraminic acid aldolase;
an *N*-acetylglucosamine 2' epimerase;
a phosphate kinase selected from the group consisting of a pyruvate kinase, a myokinase, a creatine phosphate kinase, an acetyl phosphate kinase, and a polyphosphate kinase; and
a pyrophosphorylase selected from the group consisting of a UDP-Glc pyrophosphorylase, a UDP-Gal pyrophosphorylase, a UDP-GalNAc pyrophosphorylase, a GDP-mannose pyrophosphorylase, a GDP-fucose pyrophosphorylase, and a UDP-GlcNAc pyrophosphorylase.

23. (once amended) The nucleic acid of claim 1, wherein the catalytic domain of the glycosyltransferase and the catalytic domain of the accessory enzyme are joined by a peptide linker.

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26. (once amended) An expression vector which comprises the nucleic acid of claim 1.

27. (once amended) A host cell which comprises the expression vector of claim 26.

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33. (once amended) A method of producing a fusion polypeptide, the method comprising:

a) introducing into a host cell the expression vector of claim 26, under conditions where the host cell is transformed with the expression vector; and

b) culturing the transformed host cell under conditions where the fusion polypeptide is expressed in the transformed host cell.

34. (once amended) The method of claim 33 further comprising a step of purifying the expressed fusion polypeptide.

35. (once amended) The method of claim 33 further comprising a step of permeabilizing the host cell expressing the fusion polypeptide.

Please add new claim 36.

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36. (newly added) The nucleic acid of claim 1, wherein the accessory enzyme is a pyrophosphorylase.

REMARKS

Claims 1-35 are pending in the present application. In this response, claims 1, 9, 23, 26, 27, and 33-35 are amended to more clearly define the claimed invention; claim 4 is cancelled to expedite prosecution; and claims 28-32 are cancelled because, in the parent application, the Examiner withdrew the claims from consideration as allegedly being drawn to a non-elected invention. Claim 36 is added as a new claim.

Specifically, claim 1 is amended to recite an "isolated" nucleic acid encoding a fusion protein comprising a) a catalytic domain of a glycosyltransferase "that catalyzes the transfer of a saccharide, from a saccharide donor comprising a nucleotide sugar, to an